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| PRE-APPEAL BRIEF REQUEST FOR REVIEW | | Docket Number: 11973-007001 |
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| | First Named Inventor Eric Moore et al. | |
| | Art Unit 2192 | Examiner Zheng Wei |
| | | |
| <p>Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.</p> <p>This request is being filed with a Notice of Appeal.</p> <p>The review is requested for the reason(s) stated on the attached sheet(s). Note: No more than five (5) pages may be provided.</p> <p>I am the</p> <p><input type="checkbox"/> applicant/inventor.</p> <p><input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)</p> <p><input checked="" type="checkbox"/> attorney or agent of record <u>52,978</u> (Reg. No.)</p> <p><input type="checkbox"/> attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 _____</p> <p style="text-align: right;"> _____ /Brian J. Gustafson/ Signature _____ Brian J. Gustafson Typed or printed name _____ (650) 839-5070 Telephone number _____ December 14, 2007 Date </p> <p>NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.</p> <p><input type="checkbox"/> Total of no. forms are submitted.</p> | | |

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Eric Moore et al.
Serial No. : 10/639,674
Filed : August 11, 2003
Title : RULE ENGINE

Art Unit : 2192
Examiner : Zheng Wei
Conf. No. : 6822

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Commissioner for Patents
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PRE-APPEAL BRIEF REQUEST FOR REVIEW

The brief is in response to legal and factual deficiencies in the final Office Action mailed June 15, 2007. A two-month early reply was timely filed on August 15, 2007. However, no Advisory Action was mailed prior to the six month deadline.

Claims 1-29 are currently pending. Claims 1, 16, and 26 are independent. The examiner rejected claims 1-2, and 5-6 under 35 U.S.C. § 102(b) as allegedly anticipated by U.S. Patent No. 4,924,408 ("Highland"). The examiner rejected claims 16-18, 20, and 25 under 35 U.S.C. § 102(b) as allegedly anticipated by U.S. Patent No. 5,423,041 ("Burke"). The examiner rejected claims 3-4 under 35 U.S.C. § 103(a) as allegedly unpatentable over Highland in view of Luke, "A Rule-Based Specification System for Computational Fluid Dynamics ("Luke"). The examiner rejected claims 26-28 under 35 U.S.C. § 103(a) as allegedly unpatentable over Highland. The examiner rejected claims 7-15 and 29 under 35 U.S.C. § 103(a) as allegedly unpatentable over Highland and Burke. The examiner rejected claims 19 and 21-24 under 35 U.S.C. § 103(a) as allegedly unpatentable over Burke.

I. The cited art does not disclose or suggest a dependency graph that includes a plurality of ranked nodes including entity nodes, attribute nodes, condition nodes, and rule nodes.

Claim 1 stands rejected over Highland. Claim 1 recites a method that includes receiving a rule set as a single package in a processing system. A dependency graph is generated for the rule set. The dependency graph includes a plurality of ranked nodes. The nodes include entity nodes, attribute nodes, condition nodes, and rule nodes. A sequence of processing logic is

generated for optimal processing of inputted facts according to a rank order of the nodes in the dependency graph.

The examiner states that Highland discloses the claimed dependency graph at FIG. 2a-2b and col. 5, lines 50-55. The applicant respectfully disagrees.

Highland discloses a method of converting a knowledge base and an inference engine into program source code. *See* col. 1, lines 18-23. The cited portions of Highland disclose translating rules of the knowledge base into a rule tree network.

Specifically, col. 5, lines 50-50 simply provide the brief description of the drawings for FIG. 2, which reads as follows:

FIG. 2 (comprised of FIG. 2a, FIG. 2b and FIG. 2c) illustrates how rules of a knowledge base (FIG. 2a) can be translated into a rule tree network (FIG. 2b), and how this rule tree network can be converted into compilable, procedural, program code according to the present invention (FIG. 2c).

FIG. 2a shows a rule of a knowledge base, specifically, "If $A > 10$ and $B < 0$ then display A". FIG. 2b shows a rule tree representing the rule of FIG. 2a. Finally, FIG. 2c, shows the generated code corresponding to the rule. *See* FIGS. 2a-2c; col. 5, lines 63-28. The rule tree represents one or more logically partitioned rules. *See* col. 6, lines 28-31. Thus, each node in the rule tree corresponds to a component of that rule. The rule tree is traversed beginning with the root node and labeled with a sequential index value, uniquely identifying each node in the rule tree. *See* col. 6, lines 37-42. A procedure is generated for the rule whereby the rule is evaluated according to the index values. *See* col. 6, lines 44-52.

The examiner asserts that the root of the sub tree shown in FIG. 2b is "equivalent to the attribute node", without further explanation. Additionally, the examiner identifies a rule condition as a condition node, but points out other nodes of the rule tree, *e.g.*, "goal" and "action" labels without identifying how they correspond to any of the claimed nodes. Thus, the examiner does not identify any portion of Highland as disclosing the claimed entity nodes or rule nodes as included in a dependency graph for a rule set.

In particular, the whole tree shown, for example, in FIGS. 1b and 2b relied upon by the examiner are rule trees that represent all the components of a particular rule. Therefore the rule

trees do not include separate rule nodes since it is the rule as a whole that is represented by the tree. Furthermore, the disclosed rule trees do not include entity nodes.

The examiner must identify each and every claim limitation in Highland in order to maintain a rejection under 35 U.S.C. § 102. Failing to identify each and every claim limitation in a single reference is clear legal error. The examiner and the cited portions of Highland fail to disclose or suggest a dependency graph that includes entity nodes, condition nodes, and rule nodes, as required by claim 1.

Furthermore, in response to the applicant's previous arguments, the examiner states that a tree is a type of graph. However, the applicant did not argue that the tree of Highland was not a graph. Instead, the applicant stated that Highland does not disclose or suggest the claimed dependency graph including entity nodes, attribute nodes, condition nodes, and rule nodes as explicitly required by claim 1.

The applicant respectfully submits that claim 1, as well as claims 2-15, which depend from claim 1, are in condition for allowance.

Claim 26 recites a computer program product that includes limitations corresponding to those of claim 1. The examiner rejects claim 26 using the same cited portions of Highland as claim 1. For the reasons set forth above with respect to claim 1, claim 26 as well as claims 27-29, which depend from claim 26, are in condition for allowance.

II. The cited art does not disclose or suggest determining and resolving logical conflicts.

Claim 16 stands rejected over Burke. Claim 16 recites a method for automating business processes. The method includes receiving a rule set as a single package in a computer system. Logical conflicts within the rule set are determined. A logical conflict exists when two or more rules receiving the same inputs result in contradictory actions. The logical conflicts are resolved. A sequence of processing logic from the rule set is generated for optimal processing of inputted facts.

The examiner states that Burke discloses determining and resolving logical conflicts at col. 3, lines 32-35. The applicant respectfully disagrees. Col. 3, lines 32-35 reads, in pertinent part, as follows:

Within a rule-set, an application programmer may assign each rule a priority. If multiple rules are satisfied at the same time, the rule with the highest priority is selected for firing.

The cited portion of Burke discloses that a priority can be applied to rules. When more than one rule is satisfied at the same time, the priority determines which rule to fire. However, having more than one rule satisfied at the same time does not disclose or suggest a logical conflict between the rules as recited in claim 16.

Two rules can be satisfied without any logical conflict. For example, a first rule can state that a smoker is high risk. A second rule can state that a man over 40 years old is also high risk. For input facts identifying a 50 year old man that smokes, both rules are satisfied simultaneously. However, regardless of which rule is given priority, the result is the same: high risk. Thus, disclosure of a priority to apply to rules that are satisfied at the same time does not, without more, disclose or suggest determining and resolving logical conflicts between rules. The examiner fails to identify and Burke does not disclose or suggest determining logical conflicts within a rule set where a logical conflict exists when two or more rules receiving the same input result in contradictory action. Again, the examiner's failure to specifically identify each and every limitation of the claims in a single reference supporting the examiner's rejection under 35 U.S.C. § 102 is clear legal error.

The applicant respectfully submits that claim 16, as well as claims 17-25, which depend from claim 16, are in condition for allowance.

Conclusion

The applicant requests that all pending claims be allowed.

By responding in the forgoing remarks only to particular positions taken by the examiner, the applicant does not acquiesce with other positions that have not been explicitly addressed. In addition, the applicants' arguments for patentability of a claim should not be understood as implying that no other reasons for the patentability of that claim exist. Finally, the applicant's decision to amend or cancel any claim should not be understood as implying that the applicant agrees with any positions taken by the examiner with respect to that claim or other claims.

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Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: December 14, 2007

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